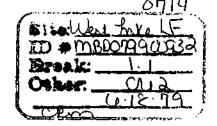


### **MEMORANDUM**



JUN 1 9 1979

It Low.

Date:

June 18, 1979

To:

Robert Robinson, Director, Solid Waste Management Program

From

Keith Schardein Laboratory Services Program

Subject:

St. Louis Area Landfill Sampling - June 12-14, 1979

The following information was gained during our recent sampling trip to the St. Louis area.

### Westlake Sanitary Landfill

Westlake has nine (9) monitoring wells. Seven (7) are along the southwest border of the property and two (2) are near the center of the property in the vicinity of the asphalt plant. Bill Canney indicated that he would complete the plat map showing well locations and send it to you.

Water depths in the collection wells were as follows: small collection well near southwest border = 2.1 feet large collection well (center of property) = 7.8 feet collection well in pit = 39.4 feet

According to personnel, the small well is not being pumped, the large well is being pumped at unstated frequencies, and the pit well is pumped daily.

### R & E Landfill

The sand filter was in poor repair. Water was pooling on its surface and flowing over and through the concrete block walls. The west wall was cracked and beginning to separate at the corners. Our sample was collected by siphoning the pooled liquid into a container as it flowed over the wall. As far as we could tell most, if not all, of the discharge was from the surface of the filter.

There has apparently been a septic tank buried at the toe of the northernmost fill on the site. There is a subsurface valve installed ahead of the tank. The only evidence of the tank is a clean-out pipe. There was no discharge pipe found and the drainageway was dry. No sample was collected.

According to the landowner, the landfill company has been working that week installing the septic tank and repairing eroded gulleys.

Franche her Irmonded to A. L. D.

DNR 0138

Joseph P. Teasdale Governor Fred A. Laiser Director

Division of Environmental Quality James P. Odendahl Director

40241317



Enclosed are results of analysis on seven (7) monitoring wells at West Lake Landfill.

Bill Canney

DNR 0139



# REPORT OF ANALYSIS

Page 1 of 2

Environment • Energy • Transportation • Food Processing

SUBMITTED BY:

Mr. William Canney West Lake Quarry Rt. #1, Box 206 Bridgeton, MO 63012 DATE: 2/19/79

PROJECT NO. 1536-019

P.O.

DATE RECEIVED: January 12, 1979.

SAMPLE ANALYZED: Seven water samples

METHODS USED: Standard Methods, 14th Edition

|                  | \         | , ,                | . \      |           | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |             |       | ومستعمد |
|------------------|-----------|--------------------|----------|-----------|---------------------------------------|-------------|-------|---------|
| RESULTS:         | V         | $\langle  \rangle$ |          | Samp1     |                                       | / 1         | X /   |         |
| Parameter        | <u>35</u> | 36                 | 37       | 38        | 39                                    | ` <u>40</u> | 41    | `       |
| Alkalinity       | 160       | 150                | 140      | 210       | 140                                   | 220         | 310   |         |
| рH               | 7.2       | 7.4                | 6.5      | 7.7       | 7.8                                   | 7.7         | 7.6   |         |
| COD              | 220       | 130                | 170      | 180       | 100                                   | 160         | 400   |         |
| BOD              | 52        | 20                 | 7        | 18        | 11                                    | 15          | 88    |         |
| Toc              | 74        | 43                 | 45       | 57        | 33                                    | 51          | 120   |         |
| Jissolved Solids | 372       | 550                | 550      | 530       | 510                                   | 610         | 860   |         |
| Conductivity     | 1,940     | 1,700              | 1,650    | 1,550     | 1,650                                 | 1,360       | 1,080 |         |
| Hardness (EDTA)  | 250       | 320                | 370      | 350       | 320                                   | 390         | 540   |         |
| Phosphate, total | 0.49      | 0.15               | 0.58     | 0.21      | 0.04                                  | 0.04        | 0.12  |         |
| Chloride         | 94        | 100                | 110      | 76        | 76                                    | 94          | 140   |         |
| Fluoride*        | 0.72      | 0.80               | 0.78     | 0.87      | 0.73                                  | 0.84        | 0.82  |         |
| Ammonia          | <1        | <1                 | <1       | <1        | <1                                    | <1          | <1    |         |
| Nitrate          | 1.1       | 0.15               | 0.10     | 0.18      | 0.09                                  | 1.3         | 3.2   |         |
| Sulfate          | 48        | 110                | 160      | 140       | 160                                   | 160         | 190   |         |
| Sulfide          | 1.4       | 0.4                | 4.8      | 0.4       | 0.1                                   | 0.6         | <0.1  |         |
| Cyanide          |           | Analysis           | to be re | in on net | w sample:                             | s.          |       |         |

Values are reported as mg/l, except conductivity which is micromhos/cm.

\*Run on new samples taken 2/13/79.

DNR 0140

ENVIRODYNE ENGINEERS

BY: Judy Stone



## REPORT OF ANALYSIS

Page 2 of 2

Environment . Energy . Transportation . Food Processing

SUBMITTED BY: Mr. William Canney

West Lake Quarry

Rt. #1, Box 206

Bridgeton, MO 63012

DATE: 2/19/79

PROJECT NO. 1536-019

P.O.

DATE RECEIVED: January 12, 1979

SAMPLE ANALYZED: Seven water samples

METHODS USED: Standard Methods, 14th Edition

| RESULTS:         |           | <b>V</b>  | V         | Samples   |          |         | ٠       |
|------------------|-----------|-----------|-----------|-----------|----------|---------|---------|
| <u>Parameter</u> | <u>35</u> | <u>36</u> | <u>37</u> | <u>38</u> | 39       | 40      | 41      |
| Arsenic          | <0.002    | <0.002    | <0.002    | <0.002    | <0.002   | <0.002  | <0.002  |
| Cadmium          | <0.01     | <0.01     | <0.01     | <0.01     | <0.01    | <0.01   | <0.01   |
| Calcium          | 46        | 72        | 67        | 83        | 61       | 97      | 210     |
| Chromium         | <0.01     | <0.01     | 0.01      | 0.02      | < 0.01   | 0.03    | 0.03    |
| Copper           | <0.01     | <0.01     | <0.01     | <0.01     | <0.01    | <0.01   | <0.01   |
| Iron             | 3.5       | 2.4       | 7.4       | . 2.2     | 2.6      | 3.9     | 18      |
| Potassium        | 6.2       | 7.1       | 4.8       | 9.9       | 8.4      | 12      | 12      |
| Lead             | 0.041     | 0.015     | 0.015     | 0.006     | 0.005    | 0.013   | 0.059   |
| Magnesium        | 29        | 31        | 19        | 41        | 39       | 45      | 60      |
| Manganese        | 0.31      | 1.4       | 0.93      | 0.55      | 0.26     | 0.69    | 0.75    |
| Mercury          | < 0.0002  | < 0.0002  | < 0.0002  | < 0.0002  | < 0.0002 | <0.0002 | <0.0002 |
| Nickel           | <0.01     | <0.01     | <0.01     | 0.02      | 0.03     | 0.10    | 0.12    |
| Silver           | <0.001    | <0.001    | <0.001    | <0.001    | <0.001   | <0.001  | <0.001  |
| Sodium           | 110       | ` 38      | 25        | 44        | 44       | 48      | 65      |
| Zinc             | 5.5       | 2.7       | 15        | 4.0       | 3.7      | . 17    | 2.8     |

Values are reported as mg/l.

DNR 0141

ENVIRODYNE ENGINEERS

BY: Judy Stone



## REPORT OF ANALYSIS

Environment . Energy . Transportation . Food Processing

SUBMITTED BY: Mr. William Canney

West Lake Quarry Rt. #1, Box 206

Bridgeton, Missouri 63012

DATE: 2/27/79

PROJECT NO. 1536-019

P,O.

DATE RECEIVED: February 13, 1979

SAMPLE ANALYZED: Seven water samples

METHODS USED: Standard Methods, 14th Edition

RESULTATING

| Sample      | Cyanide, mg/l  |
|-------------|----------------|
| <u> </u>    | cydnide, mg/ 1 |
| 35          | <0.02          |
| 36          | <0.02          |
| 37 <b>A</b> | <0.02          |
| 38          | <0.02          |
| 39          | <0.02          |
| 40          | <0.02          |
| 41          | <0.02          |

These samples were taken to replace samples from 1/12/79.

PNURODYNE ENGINEERS

BY: Judy Store